OIPE

CRF Errors Corrected by the STIC Systems Branch

CRF Processing Date 10/4/2001

Edited by

Verified by (STIC staf

Serial Number 09/917,963

ENTERED

- ☐ Changed a file from non-ASCII to ASCII
- ☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- ☐ Edited a format error in the Current Application Data section, specifically: _____
- ☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other _____
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically: _____
- ☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: _____
- ☐ Inserted or corrected a nucleic number at the end of a nucleic line SEQ ID NO's edited: _____
- ☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included: _____
- ☐ Deleted extra, invalid, headings used by an applicant, specifically: _____
- ☑ Deleted ☑ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at end of file; ☐ page numbers throughout text; ☐ other invalid text, such as _____
- ☐ Inserted mandatory headings, specifically: _____
- ☐ Corrected an obvious error in the response, specifically: _____
- ☐ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically: _____
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Deleted *ending* stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: _____
- ☐ Other: _____

Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.

v1/95

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/917,963

DATE: 10/04/2001
TIME: 18:18:19

Input Set : A:\PTO.AMC.txt
Output Set: N:\CRF3\10042001\I917963.raw

```
      6 <110> APPLICANT: Rosanne M. Crooke
      7       Mark J. Graham
     10 <120> TITLE OF INVENTION: ANTISENSE MODULATION OF MICROSOMAL TRIGLYCERIDE TRANSFER
PROTEIN
     11       EXPRESSION
     13 <130> FILE REFERENCE: ISPH-0591
C--> 15 <140> CURRENT APPLICATION NUMBER: US/09/917,963
C--> 15 <141> CURRENT FILING DATE: 2001-07-30
     15 <160> NUMBER OF SEQ ID NOS: 137
     17 <210> SEQ ID NO: 1
     18 <211> LENGTH: 20
     19 <212> TYPE: DNA
     20 <213> ORGANISM: Artificial Sequence
     22 <220> FEATURE:
     23 <223> OTHER INFORMATION: Antisense Oligonucleotide
     25 <400> SEQUENCE: 1
     26 tccgtcatcg ctcctcaggg                                                    20
     28 <210> SEQ ID NO: 2
     29 <211> LENGTH: 20
     30 <212> TYPE: DNA
     31 <213> ORGANISM: Artificial Sequence
     33 <220> FEATURE:
     34 <223> OTHER INFORMATION: Antisense Oligonucleotide
     36 <400> SEQUENCE: 2
     37 atgcattctg cccccaagga                                                    20
     39 <210> SEQ ID NO: 3
     40 <211> LENGTH: 3392
     41 <212> TYPE: DNA
     42 <213> ORGANISM: Homo sapiens
     44 <220> FEATURE:
     45 <221> NAME/KEY: CDS
     46 <222> LOCATION: (87)...(2771)
     48 <400> SEQUENCE: 3
     49 actccctcac tggctgccat tgaaagagtc cacttctcag tgactcctag ctgggcactg  60
     50 gatgcagttg aggattgctg gtcaat atg att ctt ctt gct gtg ctt ttt ctc  113
     51                              Met Ile Leu Leu Ala Val Leu Phe Leu
     52                               1               5
     54 tgc ttc att tcc tca tat tca gct tct gtt aaa ggt cac aca act ggt  161
     55 Cys Phe Ile Ser Ser Tyr Ser Ala Ser Val Lys Gly His Thr Thr Gly
     56  10                  15                  20                  25
     58 ctc tca tta aat aat gac cgg ctg tac aag ctc acg tac tcc act gaa  209
     59 Leu Ser Leu Asn Asn Asp Arg Leu Tyr Lys Leu Thr Tyr Ser Thr Glu
     60                  30                  35                  40
     62 gtt ctt ctt gat cgg ggc aaa gga aaa ctg caa gac agc gtg ggc tac  257
     63 Val Leu Leu Asp Arg Gly Lys Gly Lys Leu Gln Asp Ser Val Gly Tyr
     64              45                  50                  55
        ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ...  305
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/917,963

DATE: 10/04/2001
TIME: 18:18:19

Input Set : A:\PTO.AMC.txt
Output Set: N:\CRF3\10042001\I917963.raw

```
68          60                  65                  70
70 ggt gat gat gac cag ttg atc caa ata acg atg aag gat gta aat gtt   353
71 Gly Asp Asp Asp Gln Leu Ile Gln Ile Thr Met Lys Asp Val Asn Val
72      75                  80                  85
74 gaa aat gtg aat cag cag aga gga gag aag agc atc ttc aaa gga aaa   401
75 Glu Asn Val Asn Gln Gln Arg Gly Glu Lys Ser Ile Phe Lys Gly Lys
76  90                  95                 100                 105
78 agc cca tct aaa ata atg gga aag gaa aac ttg gaa gct ctg caa aga   449
79 Ser Pro Ser Lys Ile Met Gly Lys Glu Asn Leu Glu Ala Leu Gln Arg
80                 110                 115                 120
82 cct acg ctc ctt cat cta atc cat gga aag gtc aaa gag ttc tac tca   497
83 Pro Thr Leu Leu His Leu Ile His Gly Lys Val Lys Glu Phe Tyr Ser
84             125                 130                 135
86 tat caa aat gag gca gtg gcc ata gaa aat atc aag aga ggt ctg gct   545
87 Tyr Gln Asn Glu Ala Val Ala Ile Glu Asn Ile Lys Arg Gly Leu Ala
88         140                 145                 150
90 agc cta ttt cag aca cag tta agc tct gga acc acc aat gag gta gat   593
91 Ser Leu Phe Gln Thr Gln Leu Ser Ser Gly Thr Thr Asn Glu Val Asp
92     155                 160                 165
94 atc tct gga aat tgt aaa gtg acc tac cag gct cat caa gac aaa gtg   641
95 Ile Ser Gly Asn Cys Lys Val Thr Tyr Gln Ala His Gln Asp Lys Val
96 170                 175                 180                 185
98 atc aaa att aag gcc ttg gat tca tgc aaa ata gcg agg tct gga ttt   689
99 Ile Lys Ile Lys Ala Leu Asp Ser Cys Lys Ile Ala Arg Ser Gly Phe
100                190                 195                 200
102 acg acc cca aat cag gtc ttg ggt gtc agt tca aaa gct aca tct gtc   737
103 Thr Thr Pro Asn Gln Val Leu Gly Val Ser Ser Lys Ala Thr Ser Val
104            205                 210                 215
106 acc acc tat aag ata gaa gac agc ttt gtt ata gct gtg ctt gct gaa   785
107 Thr Thr Tyr Lys Ile Glu Asp Ser Phe Val Ile Ala Val Leu Ala Glu
108        220                 225                 230
110 gaa aca cac aat ttt gga ctg aat ttc cta caa acc att aag ggg aaa   833
111 Glu Thr His Asn Phe Gly Leu Asn Phe Leu Gln Thr Ile Lys Gly Lys
112     235                 240                 245
114 ata gta tcg aag cag aaa tta gag ctg aag aca acc gaa gca ggc cca   881
115 Ile Val Ser Lys Gln Lys Leu Glu Leu Lys Thr Thr Glu Ala Gly Pro
116 250                 255                 260                 265
118 aga ttg atg tct gga aag cag gct gca gcc ata atc aaa gca gtt gat   929
119 Arg Leu Met Ser Gly Lys Gln Ala Ala Ala Ile Ile Lys Ala Val Asp
120                270                 275                 280
122 tca aag tac acg gcc att ccc att gtg ggg cag gtc ttc cag agc cac   977
123 Ser Lys Tyr Thr Ala Ile Pro Ile Val Gly Gln Val Phe Gln Ser His
124            285                 290                 295
126 tgt aaa gga tgt cct tct ctc tcg gag ctc tgg cgg tcc acc agg aaa   1025
127 Cys Lys Gly Cys Pro Ser Leu Ser Glu Leu Trp Arg Ser Thr Arg Lys
128        300                 305                 310
130 tac ctg cag cct gac aac ctt tcc aag gct gag gct gtc aga aac ttc   1073
131 Tyr Leu Gln Pro Asp Asn Leu Ser Lys Ala Glu Ala Val Arg Asn Phe
132     315                 320                 325
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/917,963

DATE: 10/04/2001
TIME: 18:18:19

Input Set : A:\PTO.AMC.txt
Output Set: N:\CRF3\10042001\I917963.raw

```
134 ctg gcc ttc att cag cac ctc agg act gcg aag aaa gaa gag atc ctt   1121
135 Leu Ala Phe Ile Gln His Leu Arg Thr Ala Lys Lys Glu Glu Ile Leu
136 330                 335                 340                 345
138 caa ata cta aag atg gaa aat aag gaa gta tta cct cag ctg gtg gat   1169
139 Gln Ile Leu Lys Met Glu Asn Lys Glu Val Leu Pro Gln Leu Val Asp
140                 350                 355                 360
142 gct gtc acc tct gct cag acc tca gac tca tta gaa gcc att ttg gac   1217
143 Ala Val Thr Ser Ala Gln Thr Ser Asp Ser Leu Glu Ala Ile Leu Asp
144             365                 370                 375
146 ttt ttg gat ttc aaa agt gac agc agc att atc ctc cag gag agg ttt   1265
147 Phe Leu Asp Phe Lys Ser Asp Ser Ser Ile Ile Leu Gln Glu Arg Phe
148         380                 385                 390
150 ctc tat gcc tgt gga ttt gct tct cat ccc aat gaa gaa ctc ctg aga   1313
151 Leu Tyr Ala Cys Gly Phe Ala Ser His Pro Asn Glu Glu Leu Leu Arg
152     395                 400                 405
154 gcc ctc att agt aag ttc aaa ggt tct att ggt agc agt gac atc aga   1361
155 Ala Leu Ile Ser Lys Phe Lys Gly Ser Ile Gly Ser Ser Asp Ile Arg
156 410                 415                 420                 425
158 gaa act gtt atg atc atc act ggg aca ctt gtc aga aag ttg tgt cag   1409
159 Glu Thr Val Met Ile Ile Thr Gly Thr Leu Val Arg Lys Leu Cys Gln
160                 430                 435                 440
162 aat gaa ggc tgc aaa ctc aaa gca gta gtg gaa gct aag aag tta atc   1457
163 Asn Glu Gly Cys Lys Leu Lys Ala Val Val Glu Ala Lys Lys Leu Ile
164             445                 450                 455
166 ctg gga gga ctt gaa aaa gca gag aaa aaa gag gac acc agg atg tat   1505
167 Leu Gly Gly Leu Glu Lys Ala Glu Lys Lys Glu Asp Thr Arg Met Tyr
168         460                 465                 470
170 ctg ctg gct ttg aag aat gcc ctg ctt cca gaa ggc atc cca agt ctt   1553
171 Leu Leu Ala Leu Lys Asn Ala Leu Leu Pro Glu Gly Ile Pro Ser Leu
172     475                 480                 485
174 ctg aag tat gca gaa gca gga gaa ggg ccc atc agc cac ctg gct acc   1601
175 Leu Lys Tyr Ala Glu Ala Gly Glu Gly Pro Ile Ser His Leu Ala Thr
176 490                 495                 500                 505
178 act gct ctc cag aga tat gat ctc cct ttc ata act gat gag gtg aag   1649
179 Thr Ala Leu Gln Arg Tyr Asp Leu Pro Phe Ile Thr Asp Glu Val Lys
180                 510                 515                 520
182 aag acc tta aac aga ata tac cac caa aac cgt aaa gtt cat gaa aag   1697
183 Lys Thr Leu Asn Arg Ile Tyr His Gln Asn Arg Lys Val His Glu Lys
184             525                 530                 535
186 act gtg cgc act gct gca gct gct atc att tta aat aac aat cca tcc   1745
187 Thr Val Arg Thr Ala Ala Ala Ala Ile Ile Leu Asn Asn Asn Pro Ser
188         540                 545                 550
190 tac atg gac gtc aag aac atc ctg ctg tct att ggg gag ctt ccc caa   1793
191 Tyr Met Asp Val Lys Asn Ile Leu Leu Ser Ile Gly Glu Leu Pro Gln
192     555                 560                 565
194 gaa atg aat aaa tac atg ctc gcc att gtt caa gac atc cta cgt ttg   1841
195 Glu Met Asn Lys Tyr Met Leu Ala Ile Val Gln Asp Ile Leu Arg Leu
196 570                 575                 580                 585
198 gaa atg cct gca agc aaa att gtc cgt cga gtt ctg aag gaa atg gtc   1889
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/917,963

DATE: 10/04/2001
TIME: 18:18:19

Input Set : A:\PTO.AMC.txt
Output Set: N:\CRF3\10042001\I917963.raw

```
199 Glu Met Pro Ala Ser Lys Ile Val Arg Arg Val Leu Lys Glu Met Val
200                 590                 595                 600
202 gct cac aat tat gac cgt ttc tcc agg agt gga tct tct tct gcc tac   1937
203 Ala His Asn Tyr Asp Arg Phe Ser Arg Ser Gly Ser Ser Ser Ala Tyr
204             605                 610                 615
206 act ggc tac ata gaa cgt agt ccc cgt tcg gca tct act tac agc cta   1985
207 Thr Gly Tyr Ile Glu Arg Ser Pro Arg Ser Ala Ser Thr Tyr Ser Leu
208         620                 625                 630
210 gac att ctc tac tcg ggt tct ggc att cta agg aga agt aac ctg aac   2033
211 Asp Ile Leu Tyr Ser Gly Ser Gly Ile Leu Arg Arg Ser Asn Leu Asn
212     635                 640                 645
214 atc ttt cag tac att ggg aag gct ggt ctt cac ggt agc cag gtg gtt   2081
215 Ile Phe Gln Tyr Ile Gly Lys Ala Gly Leu His Gly Ser Gln Val Val
216 650                 655                 660                 665
218 att gaa gcc caa gga ctg gaa gcc tta atc gca gcc acc cct gac gag   2129
219 Ile Glu Ala Gln Gly Leu Glu Ala Leu Ile Ala Ala Thr Pro Asp Glu
220                 670                 675                 680
222 ggg gag gag aac ctt gac tcc tat gct ggt atg tca gcc atc ctc ttt   2177
223 Gly Glu Glu Asn Leu Asp Ser Tyr Ala Gly Met Ser Ala Ile Leu Phe
224             685                 690                 695
226 gat gtt cag ctc aga cct gtc acc ttt ttc aac gga tac agt gat ttg   2225
227 Asp Val Gln Leu Arg Pro Val Thr Phe Phe Asn Gly Tyr Ser Asp Leu
228         700                 705                 710
230 atg tcc aaa atg ctg tca gca tct ggc gac cct atc agt gtg gtg aaa   2273
231 Met Ser Lys Met Leu Ser Ala Ser Gly Asp Pro Ile Ser Val Val Lys
232     715                 720                 725
234 gga ctt att ctg cta ata gat cat tct cag gaa ctt cag tta caa tct   2321
235 Gly Leu Ile Leu Leu Ile Asp His Ser Gln Glu Leu Gln Leu Gln Ser
236 730                 735                 740                 745
238 gga cta aaa gcc aat ata gag gtc cag ggt ggt cta gct att gat att   2369
239 Gly Leu Lys Ala Asn Ile Glu Val Gln Gly Gly Leu Ala Ile Asp Ile
240                 750                 755                 760
242 tca ggt gca atg gag ttt agc ttg tgg tat cgt gag tct aaa acc cga   2417
243 Ser Gly Ala Met Glu Phe Ser Leu Trp Tyr Arg Glu Ser Lys Thr Arg
244             765                 770                 775
246 gtg aaa aat agg gtg act gtg gta ata acc act gac atc aca gtg gac   2465
247 Val Lys Asn Arg Val Thr Val Val Ile Thr Thr Asp Ile Thr Val Asp
248         780                 785                 790
250 tcc tct ttt gtg aaa gct ggc ctg gaa acc agt aca gaa aca gaa gca   2513
251 Ser Ser Phe Val Lys Ala Gly Leu Glu Thr Ser Thr Glu Thr Glu Ala
252     795                 800                 805
254 ggc ttg gag ttt atc tcc aca gtg cag ttt tct cag tac cca ttc tta   2561
255 Gly Leu Glu Phe Ile Ser Thr Val Gln Phe Ser Gln Tyr Pro Phe Leu
256 810                 815                 820                 825
258 gtt tgc atg cag atg gac aag gat gaa gct cca ttc agg caa ttt gag   2609
259 Val Cys Met Gln Met Asp Lys Asp Glu Ala Pro Phe Arg Gln Phe Glu
260                 830                 835                 840
262 aaa aag tac gaa agg ctg tcc aca ggc aga ggt tat gtc tct cag aaa   2657
263 Lys Lys Tyr Glu Arg Leu Ser Thr Gly Arg Gly Tyr Val Ser Gln Lys
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/917,963

DATE: 10/04/2001
TIME: 18:18:19

Input Set : A:\PTO.AMC.txt
Output Set: N:\CRF3\10042001\I917963.raw

```
264              845                 850                 855
266 aga aaa gaa agc gta tta gca gga tgt gaa ttc ccg ctc cat caa gag   2705
267 Arg Lys Glu Ser Val Leu Ala Gly Cys Glu Phe Pro Leu His Gln Glu
268         860                 865                 870
270 aac tca gag atg tgc aaa gtg gtg ttt gcc cct cag ccg gat agt act   2753
271 Asn Ser Glu Met Cys Lys Val Val Phe Ala Pro Gln Pro Asp Ser Thr
272     875                 880                 885
274 tcc agc gga tgg ttt tga aactgacctg tgatatttta cttgaatttg          2801
275 Ser Ser Gly Trp Phe
276 890
278 tctccccgaa agggacacaa tgtggcatga ctaagtactt gctctctgag agcacagcgt 2861
279 ttacatattt acctgtattt aagatttttg taaaaagcta caaaaaactg cagtttgatc 2921
280 aaatttgggt atatgcagta tgctacccac agcgtcattt tgaatcatca tgtgacgctt 2981
281 tcaacaacgt tcttagttta cttatacctc tctcaaatct catttggtac agtcagaata 3041
282 gttattctct aagaggaaac tagtgtttgt taaaaacaaa aataaaaaca aaaccacaca 3101
283 aggagaaccc aattttgttt caacaatttt tgatcaatgt atatgaagct cttgatagga 3161
284 cttccttaag catgacggga aaaccaaaca cgttccctaa tcaggaaaaa aaaaaaaaaa 3221
285 aaaaagtaag acacaaacaa accatttttt tctcttttt tggagttggg ggcccaggga 3281
286 gaagggacaa ggcttttaaa agacttgtta gccaacttca agaattaata tttatgtctc 3341
287 tgttattgtt agttttaagc cttaaggtag aaggcacata gaaataacat c          3392
289 <210> SEQ ID NO: 4
290 <211> LENGTH: 18
291 <212> TYPE: DNA
292 <213> ORGANISM: Artificial Sequence
294 <220> FEATURE:
295 <223> OTHER INFORMATION: PCR Primer
297 <400> SEQUENCE: 4
298 cgtgggctac cgcatttc                                              18
300 <210> SEQ ID NO: 5
301 <211> LENGTH: 22
302 <212> TYPE: DNA
303 <213> ORGANISM: Artificial Sequence
305 <220> FEATURE:
306 <223> OTHER INFORMATION: PCR Primer
308 <400> SEQUENCE: 5
309 tcatcatcac catcaggatt cc                                        22
311 <210> SEQ ID NO: 6
312 <211> LENGTH: 27
313 <212> TYPE: DNA
314 <213> ORGANISM: Artificial Sequence
316 <220> FEATURE:
317 <223> OTHER INFORMATION: PCR Probe
319 <400> SEQUENCE: 6
320 tccaacgtgg atgtggcctt actatgg                                   27
322 <210> SEQ ID NO: 7
323 <211> LENGTH: 19
324 <212> TYPE: DNA
325 <213> ORGANISM: Artificial Sequence
327 <220> FEATURE:
```

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/917,963

DATE: 10/04/2001
TIME: 18:18:20

Input Set : A:\PTO.AMC.txt
Output Set: N:\CRF3\10042001\I917963.raw

L:15 M:270 C: Current Application Number differs, Replaced Current Application No
L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date

OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/917,963

DATE: 08/07/2001
TIME: 13:32:10

Input Set : A:\917963.txt
Output Set: N:\CRF3\08072001\I917963.raw

Does Not Comply
Corrected Diskette Needed

6 <110> APPLICANT: Rosanne M. Crooke
7 Mark J. Graham
10 <120> TITLE OF INVENTION: ANTISENSE MODULATION OF MICROSOMAL TRIGLYCERIDE TRANSFER PROTEIN
11 EXPRESSION
13 <130> FILE REFERENCE: ISPH-0591
C--> 15 <140> CURRENT APPLICATION NUMBER: US/09/917,963
C--> 15 <141> CURRENT FILING DATE: 2001-07-30
15 <160> NUMBER OF SEQ ID NOS: 137

ERRORED SEQUENCES

1983 <210> SEQ ID NO: 137
1984 <211> LENGTH: 20
1985 <212> TYPE: DNA
1986 <213> ORGANISM: Artificial Sequence
1988 <220> FEATURE:
1989 <223> OTHER INFORMATION: Antisense Oligonucleotide
1991 <400> SEQUENCE: 137
1992 atcaactgaa gttctccact 20
E--> 1994 1
E--> 1997 35

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/917,963

DATE: [illegible]
TIME: [illegible]

Input Set : A:\917963.txt
Output Set: N:\CRF3\08072001\I917963.raw

L:15 M:270 C: Current Application Number differs, Replaced Current Application No
L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:1994 M:254 E: No. of Bases conflict, LENGTH:Input:1 Counted:20 SEQ:137
M:254 Repeated in SeqNo=137